

Three New Species of Termites from Caroline Islands.

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With 3 figures in text.

In the present paper is given a record of three new species of termites from Caroline Islands, which were collected by Mr. R. Kanehira, expert of the Forestry Station of the Government of Formosa, in the year 1915. Here I beg to express my sincere thanks to him for kindly offering me the interesting specimens for examination.

Calotermes (Neotermes) Kanehirae nov. sp.

Imago. — Head and pronotum reddish brown; abdomen somewhat paler; antennæ yellow; legs brownish yellow. Head and pronotum very sparsely provided with spiny hairs; wing-stumps pilose; abdominal tergites coarsely pilose due to spiny hairs mingled with minute ones.

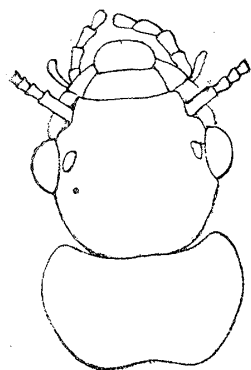
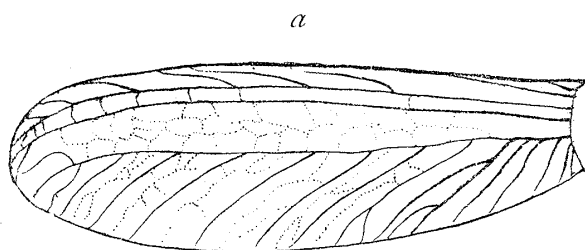


Fig. 1.

Calotermes Kanehirae.

Imago.

a, anterior wing,

b, head and pronotum.

Head quadrate, sides converging anteriorly, anterior border straight, posterior border rounded; basal portion of clypeus very short, nearly one-fifth as long as broad, yellow in apical parts; labrum tongue-shaped, longer than broad; eyes large; ocellus approximated to eye, yellow and oval; antennæ 19-jointed, 2nd. joint longer than 3rd., 4th. joint shorter than 3rd.;

fontanelle indistinct; pronotum much broader than head, quadrate, strongly vaulted above, anterior border straight, posterior border slightly curved at middle, postero-lateral corners rounded; posterior border of mesonotum and metanotum nearly straight, the former narrower than the latter; anterior wing-stumps very large, entirely covering the posterior; wing pale brown, darker anteriorly; veins (except cubitus) reddish brown, subcostal nerve very short, radius united with costal at the basal two-fifths of the wing, radius-sector with six branches, median nerve running near and parallel to the former, apical half of the two nerves connected with each other; cubitus running through middle of wing, with ca. 14 branches, of which the proximal ones are stronger (anterior wing); in the posterior wing median nerve starting from the proximal one-fourth of radius-sector.

Length of body with wing.....	17,50 mm.
Length of body without wing	10,50 mm.
Length of head	1,71 mm.
Width of head	1,78 mm.
Width of pronotum	2,28 mm.
Length of pronotum	1,31 mm.
Length of anterior wing	13,00 mm.

Habitat. — Palao Island; collected on March 26, 1915.

Remarks. — The nearest relative of this species appears to be *Calotermes (N.) militaris* from Ceylon. However, it differs from that species in having much narrower head and pronotum.

***Arrhinotermes ponapiensis* nov. sp.**

Imago. — Head pale reddish brown; thorax and abdomen somewhat paler; antennæ and legs dark yellow. Head very sparsely provided with spiny hairs; outer border of pronotum with a series of hairs; posterior border of abdominal tergites with a series of minute hairs mingled with long spiny hairs.

Head round, flattened; fontanelle distinct, directed upwards; from the

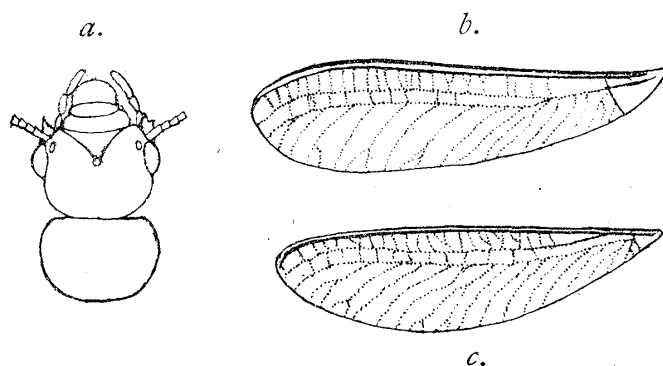


Fig. 2. *Arrhinotermes ponapensis*.
Imago. *a*, head and pronotum. *b*, anterior wing.
c posterior wing.

fontanelle runs a shallow trumpet-like depression, widening anteriorly and reaching to posterior border of clypeus; basal portion of clypeus swollen, slightly shorter than half the width; eyes prominent; ocellus ap-

proximated to eye; antennæ 19-jointed, 2nd. joint nearly as long as 3rd., 4th. joint shorter than 3rd.; pronotum kidney-shaped, anterior border weakly bilobed, posterior border broadly rounded, antero-lateral corners depressed; mesonotum and metanotum narrower than pronotum, their posterior border nearly straight; wings hyaline, with yellowish costal margin, costal and radius nerves reddish brown, other nerves transparent; radius nerve of anterior wing not branched, running near and parallel to the costal; proximal parts of median and cubitus nerves united, the former without branch but connected with radius and cubitus by numerous irregular veins; cubitus with 15 branches, reaching to tip of wing; median nerve of posterior wing starting from proximal part of radius, connected with radius and cubitus by numerous short veins; cubitus with ca. 14 branches, running near and parallel to median nerve; anterior wing-stumps covering the posterior.

Length of body with wing 11.00 mm.

Length of body without wing 5.50 mm.

Length of head 1.15 mm.

Width of head 1.25 mm.

Width of pronotum 1.13 mm.

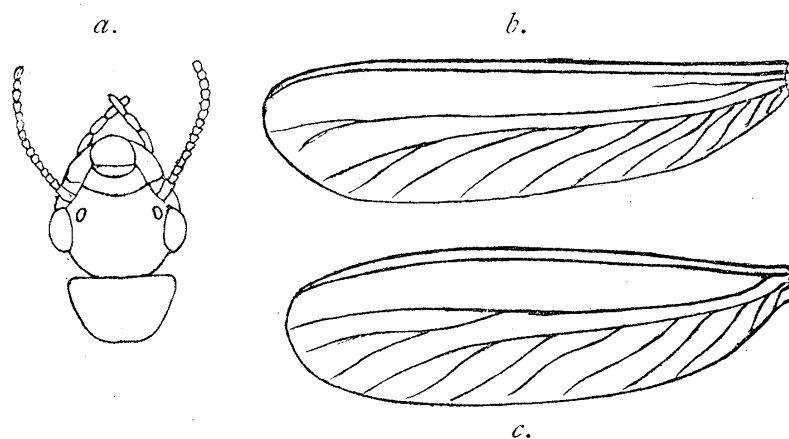
Length of pronotum 1.31 mm.

Length of anterior wing 9.00 mm.

Habitat. — Ponapi Island, collected on Jan. 27, 1915.

***Eutermes (Grallatotermes) brevirostris* nov. sp.**

Imago. — Head chestnut brown, shiny; thorax somewhat paler; abdomen dark brown; mouthparts, antennæ and legs brownish yellow. Head, pronotum, wing-stumps and abdominal tergites densely covered with minute hairs; mesonotum and metanotum nearly smooth.

Fig. 3. *Eutermes brevirostris*.

Imago. *a*, head and pronotum. *b*, anterior wing. *c*, posterior wing.

Head round, slightly vaulted above; eyes very large prominent; ocellus separated from eye by a distance less than half the diameter of the latter;

fontanelle indistinct; basal parts of clypeus short, nearly one-fourth as long as wide; antennæ 15-jointed, 2nd. joint very slightly longer than 3rd., 4th. joint as long as 3rd.; pronotum semilunar with rounded antero-lateral corners, anterior border straight, slightly elevated, posterior border broadly rounded; wing-stumps subequal, anterior one not covering the posterior; wings brownish, nerves yellowish brown; radius nerve of anterior wing running near and parallel to costal; median nerve running nearer to cubitus than to radius, giving off three branches at the tip; cubitus not reaching to tip of wing, with 8 branches, of which the proximal four are stronger; in the posterior wing median nerve starting from radius, cubitus with ca. 12 branches.

Length of body with wing.....	15,00 mm.
Length of body without wing	7-8,00 mm.
Length of head	1,25 mm.
Width of head	1,18 mm.
Width of pronotum.....	1,28 mm.
Length of pronotum	0,78 mm.

Soldier (the larger form). — Head blackish brown, tip of rostrum reddish brown; abdominal tergites darker; antennæ and legs pale yellowish brown. Head very sparsely pilose; abdominal tergites provided with microscopical hairs, posterior three segments with spiny hairs along the posterior border.

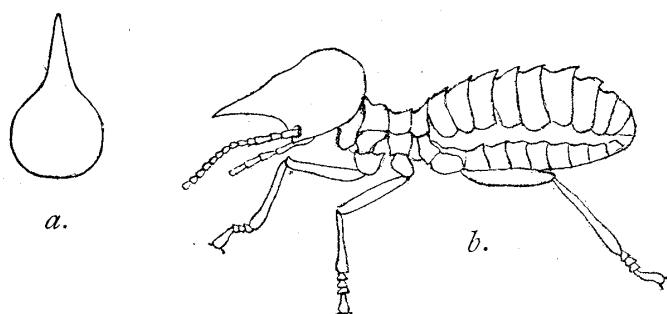


Fig. 4. *Eutarmes brevirostris*.
Soldier. a, shape of head. b, lateral view.

Head round, with short conical rostrum, its anterior surface making a weak curve with upper surface of head; antennæ 13-jointed, 3rd. joint about twice as long as 4th. and longer than 2nd.; pronotum

saddle-shaped, short, anterior border rounded; legs slender, elongate.

Length of body..... 4,00 mm.

Length of head with rostrum1,63–1,69 mm.

Length of head without rostrum.....1,03–1,09 mm.

Width of head 1,09 mm.

Width of pronotum0,56–0,62 mm.

Soldier (the smaller form).—Colour and hairiness as in the larger form. Antennæ 13-jointed, 2nd. joint as long as 4th., 3rd. joint much longer than 2nd.

Length of body..... 3,00 mm.

Length of head with rostrum1,59–1,63 mm.

Length of head without rostrum..... 1,03 mm.

Width of head1,03–1,09 mm.

Width of pronotum0,50–0,56 mm.

Worker (the larger form).—Head dark brown, paler anteriorly; antennæ, legs and abdomen yellowish brown. Head and abdominal tergites densely provided with microscopical hairs; on the posterior two or three abdominal tergites long spiny hairs present in addition.

Head round, sutures distinct, whitish; transversal band rather long; basal parts of clypeus nearly half as long as broad, slightly swollen; antennæ 14-jointed, 3rd. joint slightly longer than 2nd. and about twice as long as 4th.; pronotum saddle-shaped, anterior border indented at middle.

Length of body..... 5,10 mm.

Width of head 1,25 mm.

Width of pronotum 0,69 mm.

Worker (the smaller form). — Head yellowish brown, rather pale; antennæ, legs and abdomen yellowish white. Hairiness as in the larger form.

Head round; basal parts of clypeus shorter than half the width; antennæ 14-jointed, 2nd. joint longer than 3rd., 4th. joint ring-shaped and half as long as 3rd.; pronotum saddle-shaped, anterior border strongly elevated, slightly indented at middle.

Length of body..... 3,80 mm.

Width of head 0,87 mm.

Width of pronotum 0,47 mm.

Habitat. — Ponapi Island; collected on Jan. 26, 1915. Palao Island; collected on March 12, 1915.

Remarks. — This new species is very closely allied to *Eutermes* (*G.*) *luzonicus* Oshima from Luzon, but the rostrum in the soldier is shorter than in that species.